**IN THE CLAIMS:**

1- 44. (Canceled)

1    45. (Currently Amended)  A method to allocate a network resource, the method including

2    employing a computer system configured by a resource agent program as a resource agent

3    to:

4         receive a first bid for the network resource from a computer system configured by a

5    first agent program as a first buyer agent,

6         transmit a notification message regarding a second bid to the first buyer agent, the

7    second bid having been received from a computer system configured by a second agent

8    program as a second buyer agent,

9         determine an auction-termination time in accordance ~~to~~ <u>with</u> an allocation rule,

10        receive an updated bid from the first buyer in response to the notification message,

11    the updated bid having been received before expiration of the auction-termination time, and

12        allocate the network resource among said buyer agents in accordance with the bids

13    and the allocation rule,

14        <u>wherein the allocation is such that in at least some circumstances the network</u>

15    <u>resource is allocated to both said buyer agents in response to the bids;</u>

16        wherein the bids submitted by the buyer agents are computed, independently of a

17    user's input, in accordance with a valuation rule and/or a strategy rule received from the

18    user, and

19        wherein the buyer agent programs are such that a computer different from the one

20    configured as the first buyer agent can be configured as the second buyer agent.


46. (Cancelled).


1    47. (Previously presented)  The method of claim 45, where the network resource includes at

2    least one of:  a bandwidth, a buffer space, and a processing time.

1    48. (Previously Presented)  The method of claim 45, where:

2         the first buyer agent is associated with the user, and

3    the first buyer agent operates on a buyer server located remotely from a computer

4    associated with the user.

49- 50.  (Cancelled).

1    51.  (Previously presented)  The method of claim 45, where the bid is based on a truthful

2    best reply strategy.

1    52.  (Previously presented)  The method of claim 45, where the bid is based on a

2    measurement of the network resource.

53.  (Cancelled)

1    54.  (Previously presented)  The method of claim 45, where the allocation rule includes one

2    of: an English Auction allocation rule, a continuous bid-ask allocation rule, a progressive

3    second price auction allocation rule, and a hold option allocation rule.

1    55.  (Previously Presented)  The method of claim 45, where allocating includes:

2         generating at least one command to a network device based on a resource control

3    protocol for allocating the network resource.

1    56.  (Previously presented)  The method of claim 45, where allocating includes:

2         generating at least one command based on one of SNMP and COPS for allocating

3    the network resource.

1    57.  (Previously presented)  The method of claim 45, where allocating includes:

2         generating at least one command for at least one device for controlling the network

3    resource.

1    58.  (Previously Presented)  The method of claim 45, further including:

2         receiving a data message from a computer system configured by a seller agent

3    program as a seller agent, the data message associating the network resource with an offer to

4    sell.

1     59. (Previously Presented) The method of claim 45, further including:

2          transmitting a notification message to the first buyer agent, wherein the notification

3   message is determined by using at least one of:

4                 an available quantity of the network resource,

5                 an allocation of the network resource,

6                 a bid from the first buyer agent,

7                 a bid from the second buyer agent, and

8                 an offer to sell from a computer system configured by a seller agent program

9                 as a seller agent.

1     60. (Previously Presented) The method of claim 45, wherein the notification message

2   transmitted to the first buyer agent indicates that the second bid affects an expected

3   allocation of the network resource.

    61. (Cancelled)

1     62. (Previously Presented) The method of claim 45, further including employing the

2   resource agent to:

3          receive a data message for reallocating an allocated network resource from the first

4   buyer agent to a different buyer agent, and

5          based on the data message, reallocate the allocated network resource to the different

6   buyer agent.

1     63. (Previously Presented) The method of claim 45 further including

2          employing the resource agent to store information in a memory space, wherein the

3   stored information comprises at least one of:

4                 (i) an available quantity of the network resource,

5                 (ii) an allocation of the network resource,

6                 (iii) a bid from the first buyer agent,

7                 (iv) a bid from the second buyer agent, and

8          (iv)  an offer to sell from a computer system configured by a seller agent

9    program as a seller agent.

1    64.  (Currently Amended)  A system to allocate a network resource, the system including:

2         a computer system, and

3         a first agent program for configuring the computer system into a first buyer agent

4    that is capable of:

5             i)     generating a bid for the network resource,

6             ii)    transmitting the bid to a computer system configured by a resource

7    agent program as a resource agent,

8             iii)   receiving a notification message regarding a second bid for the

9    network resource, the second bid having been submitted by a computer system configured

10   by a second agent program as a second buyer agent,

11           iv)    transmitting an updated bid in response to the second bid before the

12   expiration of an auction-termination time, and

13           v) receiving an allocation of the network resource from the resource agent

14   that has determined the allocation in accordance with the bids and an allocation rule,

15       <u>wherein the allocation is such that in at least some circumstances the network</u>

16   <u>resource is allocated to both said buyer agents in response to the bids;</u>

17       wherein the bids submitted by the buyer agents are computed, independently of a

18   user's input, in accordance with a valuation rule and/or a strategy rule received from the

19   user, and

20       wherein the buyer agent programs are such that a computer different from the one

21   configured as the first buyer agent can be configured as the second buyer agent.

1    65.  (Previously Presented)  The system of claim 64, where the first buyer agent is capable

2    of generating the bid for the network resource including at least one of a bandwidth, a buffer

3    space, and a processing time.

1    66.  (Previously Presented)  The system of claim 64, where the first buyer agent is capable

2    of generating the bid for the network resource based on at least one of:

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3    data received from the user associated with the buyer agent,

4    a buyer allocation rule for determining an allocation of the network resource,

5    a buyer valuation rule for determining a value of the network resource, and

6    a buyer strategy rule for determining a bid for the network resource based on the

7 buyer allocation rule and the buyer valuation rule.


67. (Cancelled)


1 68. (Previously Presented)  The method of claim 45 further comprising:

2    receiving from the at least one buyer agent a corresponding data message, the

3 corresponding data message associating a bid with the network resource, and

4    allocating the network resource among the at least one buyer agent in accordance

5 with an allocation rule such that there is at least some combination of bids in respect of

6 which the allocation rule divides the resource among more than one buyer agent.


1 69. (Previously Presented)  The method of claim 68, where the network resource includes at

2 least one of:  a bandwidth, a buffer space, and a processing time.


1 70. (Previously Presented)  The method of claim 68, where each corresponding bid is based

2 on at least one of:

3    a buyer allocation rule for determining an allocation of a network resource,

4    a buyer valuation rule for determining a value of the network resource, and

5    a buyer strategy rule for determining a bid for a network resource in accordance with

6 the buyer allocation rule and the buyer valuation rule.


1 71.    (Previously Presented)  The method of claim 68, where the allocation rule includes

2 one of: an English Auction allocation rule, a continuous bid-ask allocation rule, a

3 progressive second price auction allocation rule, and a hold option allocation rule.


1 72.    (Previously Presented)  The method of claim 45, wherein the buyer agents are

2 capable of being moved by the user from one computer system to another computer system.


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1 73. (Previously Presented) The method of claim 45, wherein the network resource is
2 infinitely divisible.

1 74. (Previously Presented) The method of claim 45, wherein the network resource is
2 arbitrarily divisible.

1 75. (Previously Presented) The method of claim 50, wherein the valuation rule is
2 capable of determine a value for a quantity of the network resource, wherein the network
3 resource is divided into an infinite number of quantities.

1 76. (Currently Amended) A method for allocating a network resource comprising:
2 using a computer system configured by a first buyer agent program as a first buyer
3 agent to:
4 (i) receive a valuation and a strategy rule from a user;
5 (ii) compute a first bid independently of a user's input in accordance with the
6 valuation rule and/or the strategy rule; and
7 (iii) transmit the first bid for the network resource;
8 using a computer system configured by a second buyer agent program as a second
9 buyer agent to transmit a second bid for the network resource,
10 using a computer system configured by a resource agent program as a resource
11 agent to:
12 (i) transmit a notification message regarding the second bid to the first buyer
13 agent, and
14 (ii) determine an auction-termination time in accordance to an allocation
15 rule,
16 using the first buyer agent to transmit an updated bid in response to the notification
17 message, wherein the updated bid is received before expiration of the auction-termination
18 time; and
19 using the resource agent to allocate the network resource among the buyer agents in
20 accordance with the bids and the allocation rule;

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21      wherein the allocation is such that in at least some circumstances the network

22      resource is allocated to both said buyer agents in response to the bids.